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SEQUENCE LISTING

<110> Costa, M.
Doberstein, S.
Elson, S.
Ferguson, K.
Homberger, S.

<120> ANIMAL MODELS AND METHODS FOR ANALYSIS OF LIPID METABOLISM AND SCREENING OF PHARMACEUTICAL AND PESTICIDAL AGENTS THAT MODULATE LIPID METABOLISM

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Glu Thr Gly Ser Gly Ser Leu Ser Trp His Ser Leu Asn Thr Ser Ser
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Val Arg Asn His Gln Ser Ser Glu Asn Lys Arg Thr Leu Glu His Asn
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Cys Leu His Val Asp Asn Val Lys Arg Gly Thr His Gly Gln Leu Asp
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Pro Thr Thr Ile Thr Tyr Ile Phe Tyr Pro Gly Glu Tyr Arg Met Trp
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Glu Leu Val Pro Tyr Thr Val Ala Phe Met Leu Val Phe Ala Tyr Val
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Tyr Phe Ser Val Arg Lys Ile Asp Val Phe Arg Ser Arg Phe Leu Leu
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Ala Leu Cys Ser Val Ile Thr Thr Ala Gly Ser Leu Ala Met Ser Leu
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355 360 365

Ile Phe Pro Tyr Leu Val Ile Leu Val Gly Leu Glu Asn Ser Leu Val
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Ile Thr Lys Ser Val Val Ser Met Asp Glu Thr Phe Asp Val Lys Ile
385 390 395 400

Arg Val Ala Gln Ala Leu Ser Lys Glu Gly Trp His Ile Ser Lys Thr
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Pro Val Ile Gln Glu Phe Cys Ile Phe Ala Ile Val Gly Leu Leu Ser
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Ala Thr Ser Ala Pro Ser Gly Ser Gly Phe Ser Thr Pro Ile Lys Ala
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Arg Tyr Pro Ser Phe Asp Leu Asn Tyr Phe Leu Ser Asn Phe His Trp
660 665 670

Ser Thr Ile Met Lys Gln Tyr Asn Ile Ser Leu Ser Gly His Tyr Val
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Thr Leu Leu Pro Thr Ile Arg Leu Ser His Ala Ile Ala Pro Glu Leu
690 695 700

Ala Thr Leu Leu Arg Asn Pro Gln Glu Gln Leu Gln Gln Asn Phe Gln
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Asp Val Arg Arg Glu Ser Pro Met Val Met Ala Glu Gly Leu Pro Leu
740 745 750

Val Pro Lys Ser Pro Met Glu Ile Phe Phe Ala Ile Leu Leu Cys Cys
755 760 765

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770 775 780

Ile Cys Thr Arg Asn Tyr Ala Glu Trp Arg Ser Ser Trp His Glu Ser
785 790 795 800

Glu Ala Pro Tyr Lys Gln Thr Glu Gln Ile Leu Glu Gly Val Pro Thr
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Gln Ile Ala Gly His Lys His Arg Ile Glu Cys Leu Val Ser Asp Gly
820 825 830

Ala Tyr Ile Ile Ser Cys Cys Leu Lys Gly Gln Ile Arg Val Trp Asp
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Val Ser Pro Val Trp Cys Leu Asp Tyr Phe Asp Asn Leu Ile Ala Val
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915 920 925

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930 935 940

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Pro Thr Gln Met Tyr Asn Met Leu Leu Asp Glu Pro Arg Thr His Thr
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Pro Leu Ile Ala Thr Ser Tyr Asn Cys Pro Gln Gln Gln Pro Thr Gly
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Leu Leu Lys Ala Ala Gln Pro Thr Ala Thr Ile His His Met Asp Ala
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Pro Ala Ser Ala Pro Leu Pro Gln Gln Ser Tyr Pro Gln Pro Phe Ile
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Thr Tyr Asn Ser Lys Ala Gly Met Thr Ser Asp Glu Ala Met Tyr Leu
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Leu Leu Gln Pro Thr Val Ala Ser Pro Thr Pro Ser Pro Pro Val Ala
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Ser Arg Gly Asp Met Asn Gly Ile Met Met Ala Leu Phe Ala Ser Asn
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Met Ala Glu Val Ala His Asn Leu Leu Thr Pro Arg Glu Thr Ile Cys
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Ile His Val Met Thr Ala Leu Arg Met Lys Arg Ser Ala Pro Lys Trp
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Leu Gln Gln Phe Phe Ala Arg Tyr Tyr Met Ser Arg Ala Arg Gln Glu
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Cys Gly Arg Thr Arg Ala Thr Glu Gln Thr Gln Glu Leu Arg Trp Ala
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Asn Pro Cys Asp Pro Ala Ala His Val Ile Lys Gln Tyr Arg Glu His
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Gln Gln Gln His Ser Gly Thr Ile Val Ser Asn Val Leu Lys Tyr Thr
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Met Pro Thr Gln Leu Gln Gln Cys Gly Glu Asn Asp His Leu Pro Lys
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gcgtttgggt attcgttgct cc 22

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ctcagtcgca tccaaaactg tg 22

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aaacaggcgc tggcatctgc ac 22

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Gly Asn Ala Tyr His Asp Tyr Gly Arg Leu Cys Ala Ala His Pro Lys

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Ala Cys Leu Ser Met Ser Leu Leu Thr Met Ile Val Leu Ser Tyr Pro
35 40 45

Thr Ile Thr Arg Leu Arg Leu Pro Val Ser Thr Pro Ile Asp Val Phe
50 55 60

Trp Ser Glu His Leu His Val Asn Asp Lys Ile Ala Pro Phe Trp Ile
65 70 75 80

Asn Glu Asn Pro Ala Ser Tyr Ile Gln Gln Phe Ile Val Ser Thr Thr
85 90 95

Ile Ser Pro Trp Asn Ala Thr Glu Met Gly Pro Glu His Ala Val Arg
100 105 110

Ala Ala Ile Ala Thr Ala Phe Arg Ile Arg Gln Ile Leu Leu Ala Glu
115 120 125

Pro Ala Val Glu Glu Leu Cys Leu Arg Leu Ala Asn Gln Arg Gln Asp
130 135 140

Ser Ser Trp Pro Phe Arg Ser Lys Ser Leu Cys Val Val Leu Ser Pro
145 150 155 160

Ala Ser Ile Trp Tyr Asn Asn Leu Gln Lys Phe Arg Glu Asp Asp Asp
165 170 175

Thr Ile Thr Thr Val Phe Asn Glu His Cys Lys Ser Thr Phe Cys Met
180 185 190

Arg Asp Leu Leu Leu Gly Ala Pro Ile Ala Ala Thr Gly Ile Lys Gln
195 200 205

Lys Tyr Gln Thr Asn Arg Lys Arg Lys Ile Glu Phe Ala Val Thr Met
210 215 220

Phe Phe Ala Arg Tyr Ser Lys Lys Val Ile Gln Gly Ile Arg Glu Lys
225 230 235 240

Leu Gln Lys Glu Phe Glu Leu Val Asp Thr Pro Pro Asn Asp Gln Arg
245 250 255

Thr Phe Val Gln Val Tyr Phe His Pro Leu Lys Thr Phe Ser Asp Tyr
260 265 270

Ile Pro Leu Ile Ser Thr Tyr Phe Val Cys Met Ile Tyr Val Tyr Tyr
275 280 285

Ser Ser Arg Lys Ile Gln Met Val Ala Ser Arg Trp Gly Leu Ala Phe
290 295 300

Ala Ser Ser Phe Thr Val Ala Ser Thr Leu Leu Met Thr Thr Gly Ile
305 310 315 320

Cys Ala His Leu Asp Leu Ser Thr Thr Thr Trp Gly Ser Glu Val Tyr
325 330 335

Pro Tyr Ile Ala Leu Ile Met Gly Leu Glu Asn Thr Leu Cys Ile Thr
340 345 350

Arg Ser Val Val Tyr Thr Ser Pro Ser Leu Asp Val Ser Ser Arg Ile
355 360 365

Ala His Gly Leu Ser Gln Glu Gly Tyr Lys Leu Thr Lys Tyr Tyr Ile
370 375 380

Leu Glu Leu Leu Ala Leu Leu Ile Gly Phe Leu Thr Arg Ile Ser Asp
385 390 395 400

Ile Gln Glu Phe Cys Gln Phe Ser Val Ile Cys Val Thr Val Asp Phe
405 410 415

Tyr Met Gln Leu Phe Phe Tyr Ala Pro Cys Leu Thr Phe Asp Leu Gln
420 425 430

Arg Leu Gly Leu Glu Glu Lys Arg Lys Phe Ala Glu Ile Leu Leu Tyr
435 440 445

Glu Glu Ile Pro Arg Leu Lys Asn Tyr Ala Pro Val Ser Cys Pro Met
450 455 460

Arg Lys Ile Trp Pro Lys Leu Phe Val Met Lys Lys Met Gln Lys Arg
465 470 475 480

Arg Val Ser Asp Ser Gly Ile Glu Asp Val Met Lys Asn Asp Glu Gln
485 490 495

Arg Arg Leu Leu Ile Ser Ser Glu Phe Asp Ser Lys Asp Asp Gly Asp
500 505 510

Val Gln Glu Pro Arg Pro Glu Asp Ser Val Arg Met Lys Ile Met Tyr
515 520 525

Phe Ile Thr Arg Thr Arg Ile Val Gln Arg Thr Ile Leu Val Val Phe
530 535 540

Ala Ile Trp Thr Val Phe Leu Val Phe Phe Val Gly Ser Arg Gln Leu
545 550 555 560

Gly Met Glu Ser Asn Leu Thr Ser Lys Leu Trp Pro Pro Val Ala His
565 570 575

Glu Tyr Asn Ile Ser Leu Asn Ser Arg Tyr Val Thr Phe Leu Pro Pro
580 585 590

Ile Val Ile Asn Ala Ile Val His Pro Thr Asp Ile Leu Leu Gln Asn
595 600 605

Val Glu Lys Thr His Val Asn Val Pro Asn Glu Glu Glu Asp Ala Pro
610 615 620

Ile Leu Arg Ser Arg Ile Asp Trp Leu Glu Met Gln Leu Lys Met Tyr
625 630 635 640

Leu Ala Ala Phe Trp Leu Leu Leu Ile Thr Thr Val Ile Ser Phe Phe
645 650 655

Ala Tyr Val Phe Leu Ile Asp Arg Trp Lys Leu Arg Gly Val Lys Gln
660 665 670

Ile Gln Glu Gln Gln Met Ser Glu Thr Thr Thr Asp Ser Ser Glu Thr
675 680 685

Val Lys Asn Phe Val Asp Thr Leu Pro Ile Val Tyr Gln Gly His Arg
690 695 700

Phe Pro Ile Glu Ser Val Ala Ile Asp Pro Glu Asp Thr Ser Thr Phe
705 710 715 720

Val Ser Cys Cys Gln Glu Gly Val Val Tyr Val Trp Asn Thr Gln Thr
725 730 735

Gly Gln Arg Thr Leu Arg Ile Asn Arg Leu Arg Ala Val Pro Glu Lys
740 745 750

Gly Lys Glu Ile Pro Ser Ala Pro Lys Ile Trp Ala Ile Ala Lys Arg
755 760 765

His Phe Phe Ser Asn Thr Thr Ser His Val Val Cys Arg Glu Asp Asp
770 775 780

Val Ala Val Val Arg Leu Asp Gly Ser Ile Glu Phe Leu Arg Ile Asp
785 790 795 800

Tyr Asp Arg Thr Asp Gly Thr Ile Arg Val Arg Lys Ile Glu Leu Leu
805 810 815

Lys Ser Val Arg Ala His Gln Lys Pro Val Cys Arg Ile Ala Ile Trp
820 825 830

Lys Ser Gln Leu Ile Thr Ser Ser Phe Asp Arg Ser Ile Lys Met Trp
835 840 845

Asn Trp Ala Glu Asn Pro Glu Gln Ile Asp Ile Ser Asn Val Phe Leu
850 855 860

Ala His Asn Ser Pro Val Val Asn Leu Ala Val Asp Glu Ala Thr Ser
865 870 875 880

Ile Met Tyr Ser Ser Cys Glu Glu Gly Val Ile Cys Trp Trp Asn Leu
885 890 895

Asn Thr Gly Glu Leu Ile Arg Thr Asn Asp Asn Asn Tyr Thr Trp Ala
900 905 910

Phe Gln Leu Ala Thr Ser Ser Asp Tyr Leu Leu Gly Phe Tyr Gly Ser
915 920 925

Ser Gln Leu Tyr Met Trp Asn Val Glu Asn Gly Gln Leu Ala Cys Arg

930 935 940

Val Ser Asp Ala Leu Gly Asp Gly Thr Ser Glu Asp Thr Leu Tyr Thr
945 950 955 960

Val Gly Ser Ser Gly Val Val Ser Phe Asp Asp Gln Val Ala Ala Thr
965 970 975

Thr Ser Ser Asp Ser Val Thr Phe Trp Asp Leu Lys His Arg Ala Ile
980 985 990

Ile Gly Lys Val Lys Leu Asn Gly Lys Ile Ser Ser Met Arg Lys Asn
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1010 1015 1020

Val Thr Val Pro Leu Val Arg Phe Lys
1025 1030

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20 25 30

Ala Phe Thr Asp Ile Glu Ala Val Thr Leu Lys Arg Ala Thr Thr Phe
35 40 45

Arg Arg Leu Gln Ile Phe Gly Ala Gly Ile Trp His Asn Leu Leu Leu
50 55 60

Ala Leu Leu Ala Met Xaa Met Phe His Ala Ser Pro Val Ile Leu Ser

65 70 75 80

Pro Val Leu Ala Asn Gly Tyr Xaa Val Ser Val Arg Gly Val Asp Val
85 90 95

Arg Ser Xaa Leu Ser Asn Pro Arg Thr Gly Leu Val Ala Gly Asp Val
100 105 110

Val Lys Ser Val Asp Glu Cys
115